

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US90/03282

<b>I. CLASSIFICATION OF SUBJECT MATTER</b> (If several classification symbols apply, indicate all) <sup>3</sup> According to International Patent Classification (IPC) or to both National Classification and IPC IPC (5): G06F 15/20, 15/24 G06K 7/10 U.S. : 235/375, 472, 462																																
<b>II. FIELDS SEARCHED</b> <div style="text-align: center;">Minimum Documentation Searched <sup>4</sup></div> <table style="width: 100%; border: none;"> <tr> <td style="width: 20%; border: none;">Classification System</td> <td style="border: none;">Classification Symbols</td> </tr> <tr> <td style="border: none;">U.S.</td> <td style="border: none;">235/375, 383, 385, 462, 472</td> </tr> </table> <div style="text-align: center; margin-top: 10px;">Documentation Searched other than Minimum Documentation to the extent that such Documents are included in the Fields Searched <sup>5</sup></div>			Classification System	Classification Symbols	U.S.	235/375, 383, 385, 462, 472																										
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<b>III. DOCUMENTS CONSIDERED TO BE RELEVANT</b> <sup>14</sup> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Category <sup>6</sup></th> <th style="width: 70%;">Citation of Document, <sup>15</sup> with indication, where appropriate, of the relevant passages <sup>17</sup></th> <th style="width: 20%;">Relevant to Claim No. <sup>18</sup></th> </tr> </thead> <tbody> <tr> <td>Y, P</td> <td>US,A, 4,850,009 (ZOOK ET AL) 18 July 1989, see entire document</td> <td>1-55</td> </tr> <tr> <td>A, P</td> <td>US,A, 4,857,716 (GOMBRICH ET AL) 15 August 1989, see entire document</td> <td>1-55</td> </tr> <tr> <td>Y</td> <td>"Norand 1200" 1985, see entire document</td> <td>1-3,7-12,19-31 34-47</td> </tr> <tr> <td>A</td> <td>US,A, 4,418,277 (TREMEL ET AL) 29 November 1983</td> <td>1,2,5,8-16,33-38</td> </tr> <tr> <td>Y</td> <td>US,A, 4,793,812 (SUSSMAN ET AL) 27 December 1988, see abstract</td> <td>17</td> </tr> <tr> <td>A</td> <td>US,A, 4,773,032 (UKHARA ET AL) 20 September 1988, see figure 3</td> <td>1-55</td> </tr> <tr> <td>A</td> <td>US,S, Des 299,234 (KAJITA) 03 January 1989, see figure 1</td> <td>1-55</td> </tr> <tr> <td>A</td> <td>US,S, Des 295,411 (CHO ET AL) 26 April 1988, see figure 1</td> <td>1-55</td> </tr> <tr> <td>A, P</td> <td>US,A, 4,842,966 (OMORI ET AL) 27 June 1989, see abstract</td> <td>1-55</td> </tr> </tbody> </table>			Category <sup>6</sup>	Citation of Document, <sup>15</sup> with indication, where appropriate, of the relevant passages <sup>17</sup>	Relevant to Claim No. <sup>18</sup>	Y, P	US,A, 4,850,009 (ZOOK ET AL) 18 July 1989, see entire document	1-55	A, P	US,A, 4,857,716 (GOMBRICH ET AL) 15 August 1989, see entire document	1-55	Y	"Norand 1200" 1985, see entire document	1-3,7-12,19-31 34-47	A	US,A, 4,418,277 (TREMEL ET AL) 29 November 1983	1,2,5,8-16,33-38	Y	US,A, 4,793,812 (SUSSMAN ET AL) 27 December 1988, see abstract	17	A	US,A, 4,773,032 (UKHARA ET AL) 20 September 1988, see figure 3	1-55	A	US,S, Des 299,234 (KAJITA) 03 January 1989, see figure 1	1-55	A	US,S, Des 295,411 (CHO ET AL) 26 April 1988, see figure 1	1-55	A, P	US,A, 4,842,966 (OMORI ET AL) 27 June 1989, see abstract	1-55
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<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p><sup>*</sup> Special categories of cited documents: <sup>13</sup></p> <p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p> </div> <div style="width: 45%;"> <p>"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention</p> <p>"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step</p> <p>"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</p> <p>"&amp;" document member of the same patent family</p> </div> </div>																																
<b>IV. CERTIFICATION</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Date of the Actual Completion of the International Search <sup>2</sup></td> <td style="width: 50%; border: none;">Date of Mailing of this International Search Report <sup>2</sup></td> </tr> <tr> <td style="border: none;">12 March 1990</td> <td style="border: none; text-align: center;">26 NOV 1990</td> </tr> <tr> <td style="border: none;">International Searching Authority <sup>1</sup></td> <td style="border: none; text-align: center;">Signature of Authorized Officer <sup>16</sup> <i>Kenton R. Mullins</i> KENTON R. MULLINS</td> </tr> <tr> <td style="border: none;">ISA/US</td> <td style="border: none;"></td> </tr> </table>			Date of the Actual Completion of the International Search <sup>2</sup>	Date of Mailing of this International Search Report <sup>2</sup>	12 March 1990	26 NOV 1990	International Searching Authority <sup>1</sup>	Signature of Authorized Officer <sup>16</sup> <i>Kenton R. Mullins</i> KENTON R. MULLINS	ISA/US																							
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## FURTHER INFORMATION CONTINUED FROM THE SECOND SHEET

A, P	US,S, Des 303,112 (DESROCHERS) 29 August 1989, see figures 1-4	1-55
Y	US,S, Des 230,859 (KUROSU) 19 March 1974, see figure 1	6, 13
A	US,A, 4,020,527 (O'NEILL) 03 May 1977, see figure 3 and 4	1-55
Y	US,A, 4,141,492 (MICHEL ET AL) 27 February 1979, see summary	48-55
A	US,A, 4,569,421 (SANDSTEDT) 11 February 1986, see figure 3	1-55
A	US,A, 4,628,193 (BLUM) 09 December 1986	1-55

V. ☐ OBSERVATIONS WHERE CERTAIN CLAIMS WERE FOUND UNSEARCHABLE<sup>1</sup>

This international search report has not been established in respect of certain claims under Article 17(2) (a) for the following reasons:

1. ☐ Claim numbers \_\_\_\_\_, because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claim numbers \_\_\_\_\_, because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out<sup>2</sup>, specifically:
3. ☐ Claim numbers \_\_\_\_\_, because they are dependent claims not drafted in accordance with the second and third sentences of PCT Rule 6.4(a).

VI. ☐ OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING<sup>3</sup>

This international Searching Authority found multiple inventions in this international application as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims of the international application.
2. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims of the international application for which fees were paid, specifically claims:
3. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claim numbers:
4. ☐ As all searchable claims could be searched without effort justifying an additional fee, the International Searching Authority did not invite payment of any additional fee.

## Remark on Protest

- ☐ The additional search fees were accompanied by applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.